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Art Unit: 2161
Response to Office Action mailed July 1, 2005

Amendments to Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:.

Listing of Claims:

1.(Currently amended)   A source selection system in a communication switch having active and redundant data flow paths, said source selection system~~for routing data flow amongst data flow paths each carrying redundant data in parallel,~~ said syste.m comprising:

~~a first and a second communication modules, each communication module providing~~

a plurality of datasources operating independently and outputting in parallel the same data subject to data transmission errors that may be different for each of said datasources;

one of said datasources being selected as an active datasource, wherein the data output thereby is used as active data for onward transmission over the active data flow path within said switch, and the other of said corresponding datasources serving as a redundant datasource wherein the data output thereby acts as substitute data for use in the event of inadequate operational performance of said active datasource;

~~a route for one path for said data flow through one of said data paths through a first datasource communicating with a second datasource;~~

~~a communication link between said first datasource to said second datasource of the other communication module to provide an alternate route for said data flow;~~ a validation module associated with said plurality of datasources adapted to monitor ~~first~~ said datasources for transmission errors and ~~adapted to~~ provide information relating to said transmission errors;

an assessment module receiving said information from said validation module and assessing operational performance of each of said datasources based on said information; and

a source selector responsive to instructions from said assessment module to select as said active datasource one of said datasources based on the operational performance of said plurality of datasources ~~associated with said validation module and said first datasources, said source selector adapted to select an output datasource from said plurality of datasources; and~~

~~an assessment module associated with said validation module adapted to identify said output datasource from said first datasources utilizing said information provided~~

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~~by said validation modules and adapted to cause said source selector to select said output datasource.~~

2. (Currently amended)   The source selection system as claimed in claim 1, wherein said validation module comprises a plurality of validation sub-modules, each one of said plurality of validation sub-modules associated <u>respectively</u> with one of said plurality of datasources.

3. (Currently amended)   The source selection system as claimed in claim 2, wherein said validation module performs an integrity check on data transmitted by said ~~first~~ datasources to provide information relating to transmission errors ~~for said first datasource~~.

4.(Currently amended)   The source selection system as claimed in claim 3, wherein said assessment module evaluates severity of said transmission errors provided in said information and causes said source selector to select said ~~output~~ <u>active</u> datasource based on said severity of said transmission errors ~~for said first datasources~~.

5.(Previously presented)   The source selection system as claimed in claim 4, wherein said integrity check on said data comprises a parity check and a cyclic redundancy check.

6. (Currently amended)   The source selection system as claimed in claim 5, wherein said integrity check is performed on a payload portion of said data.

7. (Previously presented)   A source selection system as claimed in claim 6, wherein said integrity check is performed on a header portion of said data.

8. .(Currently amended)   The source selection system as claimed in claim 7, ~~wherein said communication switch comprises~~<u>further comprising</u> a plurality of ~~output~~<u>processing</u> cards and an ~~input~~<u>interface</u> card <u>in said communication switch</u>, said ~~first and second data-flow paths originating from one of said~~ plurality of ~~output~~<u>processing</u> cards <u>providing said plurality of datasources, and</u> and said source selector operating at input to said ~~input~~<u>interface</u> card.

9. .(Currently amended)   The source selection system as claimed in claim 8, wherein ~~at least one of said output cards comprises a component and~~ said integrity check is performed upon said data being received by ~~said component in said~~ at least one of said ~~output~~ <u>processing</u> cards of said communication switch.

10.(Previously presented)   The source selection system as claimed in claim 9, wherein said source selector is a multiplexer.

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11. .(Currently amended)   A method of ~~selecting a datasource~~ routing data flow in a communication switch, wherein a plurality of datasources output the same data in parallel subject to transmission errors that may be different for each datasource ~~amongst data flow paths each carrying redundant data in parallel~~, said method comprising the steps of:

~~having first and second communication paths in said communication switch, each communication path providing one of said data flow paths through a first datasource communicating with a second datasource;~~

~~having a communication link between said first datasource of one communication path to said second datasource of the other communication path to provide an alternate data flow path for said data flow between said data flow paths;~~

monitoring said ~~first~~ datasources ~~of said first and second communication paths~~ for transmission errors ~~in output originating from said first datasources and adapted~~ to provide information relating to said transmission errors; and

assessing operational performance of each of said datasources based on said information; and

based on the operational performance of said plurality of datasources, selecting one of said datasources as an active datasource, wherein the data output thereby is used as active data for onward transmission, and the other of said datasources serving as a redundant datasource wherein the data output thereby serves as substitute data for use in the event of inadequate performance of said active datasource ~~vely routing said data flow through said one of said data flow paths and said alternative data flow path utilizing said information provided by said monitoring said first datasources~~.

12. (canceled)

13. (canceled)

14. .(Currently amended)   The method ~~of routing data flow~~ as claimed in claim [[13]] 11, wherein said monitoring of said first datasources for transmission errors is executed by performing an integrity check on data originating from said ~~first~~ datasources.

15. .(Currently amended)   The method ~~of routing data flow~~ as claimed in claim 14, wherein ~~said gathering information relating to said health of said first datasources records severity of said transmission errors monitored and said primary~~ the active datasource is identified based on ~~said~~ the severity of said transmission errors ~~for said first datasources~~.

16. .(Currently amended)   The method ~~of routing data flow~~ as claimed in claim 15,

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wherein said integrity check on said data comprise parity checks and cyclic redundancy checks.

17. .(Currently amended)   The method ~~of routing data flow~~ as claimed in claim 16, wherein said integrity check is performed on a payload portion of said data.

18. .(Currently amended)   The method ~~of routing data flow~~ as claimed in claim 17, wherein said integrity check is performed on a header portion of said data.

19.(canceled)

20. (canceled)

21.new)   In a communication switch including active and redundant data flow paths a source selection system comprising:

a first communication module comprising a first chain of successive data processing elements outputting data,

a second communication module comprising a second chain of successive data processing elements outputting data;

each of said data processing elements in said first communication module having a corresponding data processing element in said second communication module, whereby successive pairs of data processing elements in said first and second communication modules output the same data in parallel subject to transmission errors which may be different for each data processing element of said successive pairs of data processing elements;

cross connects for cross-connecting an output of at least some of said data processing elements in each of said first and second chains with an input of a following said data processing element in the other of said first and second chains;

a validation module associated with said data processing elements adapted to monitor said data processing elements for transmission errors in the data output thereby and provide information relating to said transmission errors;

an assessment module receiving said information from said validation module and assessing an operational performance of said data processing elements based on said information; and

a source selector responsive to instructions from said assessment module to select as an upstream active data source for a particular said data processing element one of said data

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processing elements of a preceding pair of said data processing elements based on the operational performance of said data processing elements in said preceding pair, the other of said data processing elements of said preceding pair of said data processing elements serving as an upstream redundant source until the operational performance thereof becomes worse than said active upstream data source, whereupon said source selector switches roles of said active and redundant data sources.

22.(new)   The source selection system as claimed in claim 1, wherein said assessment module continually instructs said source selector to select the datasource with the best operational performance.

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